WHAT IS CLAIMED IS:

1. An electrosurgical stylet, comprising:

a shaft having a proximal end and a distal end and defining a longitudinal axis therebetween;

a head fixed to the distal end of the shaft; and

a tissue ablation electrode extending distally from the head.

2. The electrosurgical stylet of Claim 1, wherein the head has a substantially hemispherical distal surface, and wherein the tissue ablation electrode comprises an arcuate length of electrical conductor having a radius of curvature that is substantially coplanar with the longitudinal axis of the shaft.

3. The electrosurgical stylet of Claim 1, wherein the head is substantially frustoconical having an apex portion, and wherein the electrode includes the apex portion.

4. A biopsy device, comprising:

an elongate cannula tube having a distal and a proximal end;

a first tissue ablation element on the distal end of the cannula;

an elongate stylet disposed within the cannula for axial translation therein between an extended position and a withdrawn position and having a distal end; and

a second tissue ablation element on the distal end of the stylet.

5. The biopsy device of Claim 4, wherein the stylet comprises:

a shaft having a proximal end and a distal end and defining a longitudinal axis therebetween; and

a substantially hemispherical head fixed to the distal end of the shaft, the second tissue ablation element extending distally from the head.

6. The biopsy device of Claim 5, wherein the first and second ablation elements are activated by radio frequency electrical current, and wherein the second ablation element comprises an arcuate length of electrical conductor having a radius of curvature that is substantially coplanar with the longitudinal axis of the shaft.

7. The biopsy device of Claim 4, wherein the stylet comprises:

a shaft having a proximal end and a distal end and defining a longitudinal axis therebetween; and

a conical head terminating in an apex portion, wherein the second tissue ablation element includes the apex portion.

8. The biopsy device of Claim 4, wherein the first and second tissue ablation elements are activatable by an energy source so as to effect tissue ablation.

9. The biopsy device of Claim 8, wherein the energy source is a radio frequency energy source.

10. The biopsy device of Claim 4, further comprising stylet translation means connected to the stylet for translating the stylet within the cannula between the withdrawn and extended positions.

11. The biopsy device of Claim 10, wherein the device includes a base, wherein the stylet has a proximal end extending proximally from the proximal end of the cannula, and wherein the translation means comprises:

a carrier connected to the proximal end of the stylet and movably mounted on the base, the carrier being movable on the base between a first position in

which the stylet is in the withdrawn position and a second position in which the stylet is in the extended position; and

carrier drive means, coupled to the carrier, for moving the carrier between the first and second positions.

12. The biopsy device of Claim 11, wherein the carrier drive means is driven by a motor.

13. The biopsy device of Claim 12, wherein the motor has a drive shaft, and wherein the carrier drive means comprises:

a drive screw coupled for rotation with the drive shaft;

a screw-driven mechanism coupled between the drive screw and the carrier, whereby rotation of the drive screw in a first direction moves the carrier from the first position to the second position.

14. A biopsy device, comprising:

a base having a proximal end and a distal end;

an elongate cannula having an open distal end and an open proximal end mounted on the base for axial translation thereon between a proximal position and a distal position;

an elongate stylet disposed substantially coaxially within the cannula, the stylet having a proximal end that extends proximally from the proximal end of the cannula and that is mounted on the base for axial translation between a withdrawn position and an extended position with respect to the cannula, the stylet having a distal end;

a first tissue ablation element on the distal end of the cannula;

a second tissue ablation element on the distal end of the stylet; and

translation means for sequentially moving the stylet from its withdrawn position to its extended position, and then moving the cannula from its proximal position to its distal position.

15. The biopsy device of Claim 14, wherein the translation means comprises:

a first carrier, connected to the proximal end of the stylet and slidably mounted on the base for translation thereon between a first position corresponding to the withdrawn position of the stylet and a second position corresponding to the extended position of the stylet;

a second carrier, connected to the proximal end of the cannula and slidably mounted on the base between the first carrier and the distal end of the base, for translation thereon between a proximal position corresponding to the proximal position of the cannula and a distal position corresponding to the distal position of the cannula; and

carrier drive means, engageable with the first and second carriers, for sequentially driving the first carrier from its first position to its second position and then driving the second carrier from its first position to its second position.

16. The biopsy device of Claim 15, wherein the carrier drive means comprises:

a motor having a drive shaft;

a drive screw coupled for rotation with the drive shaft;

a screw-driven mechanism coupled between the drive screw and the carrier, whereby rotation of the drive screw in a first direction moves the carrier from the first position to the second position.

17. The biopsy device of Claim 14, wherein the first and second tissue ablation elements are activated by radio frequency electrical current.

18. The biopsy device of Claim 15, wherein the stylet is removably mounted in the first carrier and the cannula is removably mounted in the second carrier.

19. The biopsy device of Claim 14, wherein the stylet comprises:

a shaft having a proximal end and a distal end and defining a longitudinal axis therebetween; and

a substantially hemispherical head fixed to the distal end of the shaft, the second tissue ablation element extending distally from the head.

20. The biopsy device of Claim 19, wherein the first and second ablation elements are energized by radio frequency electrical current, and wherein the second ablation element comprises an arcuate length of electrical conductor having a radius of curvature that is substantially coplanar with the longitudinal axis of the shaft.

21. The biopsy device of Claim 17, wherein the first ablation element is an ablation electrode, and wherein the cannula includes a return electrode spaced from the ablation electrode.

22. The biopsy device of Claim 21, wherein the cannula includes an elongate aperture along a portion of its length, and wherein the return electrode comprises a length of conductor contained within the cannula, at least a portion of the conductor being exposed through the elongate aperture.

23. A method of taking a tissue sample from a targeted subcutaneous tissue mass within the body of a patient, comprising the steps of:

providing a probe comprising a cannula having a distal end with a first tissue ablation element, and a stylet disposed coaxially within the probe for axial movement therein between a withdrawn position and an extended position relative to the distal end of the cannula, the stylet having a distal end with a second tissue ablation element;

while activating the second ablation element with energy of a type and quantity that causes tissue ablation, advancing the probe by tissue ablation, with the stylet in the withdrawn position, into the patient's body toward the targeted tissue mass;

with the second ablation element activated, moving the stylet to its extended position so that it penetrates the targeted tissue mass by ablation, while creating a gap between the second ablation element and the distal end of the cannula that fills with a portion of the tissue from the targeted tissue mass;

while activating the first ablation element with energy of a type and quantity that causes tissue ablation, moving the cannula distally relative to the stylet so as to close the gap, thereby capturing the portion of the tissue mass within the cannula; and

withdrawing the probe from the body with the portion of the tissue mass captured within the cannula.

24. The method of Claim 23, wherein the first and second ablation elements are activated with radio frequency electrical current.

25. The method of Claim 23, wherein the stylet and the cannula are movably mounted on a base, wherein the cannula is movable between a proximal position and a distal position relative to the base, wherein the cannula is in the proximal position during the steps of advancing the probe and of moving the stylet, and wherein the step of moving the cannula includes the step of moving the cannula from its proximal position to its distal position.

26. The method of Claim 23, wherein the steps of moving the stylet and moving the cannula are performed by an electrically powered driving mechanism.

27. The method of Claim 23, wherein the step of moving the stylet creates a narrow slice through the targeted tissue mass.